

C. FSS Networks

63. We described in the Second Notice a request to remove an existing regulatory obstacle in the Radio Regulations to ease implementing NGSO FSS satellite networks in FSS spectrum in the 28 GHz range.¹²¹ Specifically, Teledesic recommended modifying RR 2613¹²² in certain parts of that spectrum range so that NGSO networks that provide FSS would have regulatory parity with GSO networks that provide FSS. We noted Teledesic's request, but made no proposal.

64. MSS proponents seeking removal at WRC-95 of RR 2613 in certain bands to accommodate their feeder link needs argue that their requirements should be satisfied before taking up newer requirements such as Teledesic's. They contend that introducing a NGSO FSS network requirement at WRC-95 may jeopardize U.S. proposals for NGSO MSS feeder links.¹²³ Additionally, GSO FSS interests that may use spectrum Teledesic requests, and are opposed to making regulatory adjustments that may give NGSO networks an "advantage" in certain bands.¹²⁴ Other GSO interests claim that the two types of networks can share spectrum, and, therefore, regulatory adjustments are unnecessary.¹²⁵

65. NGSO FSS networks can provide myriad benefits worldwide. In countries with developed communication infrastructures such as our own, they may augment or provide alternatives to existing services. In countries still developing their communication infrastructures, they can be an elemental component of a modern infrastructure. For example, an NGSO FSS system can serve as a public switched network in the sky. An operator of such a network would incur minimal incremental costs in providing service to administrations with underdeveloped infrastructure. This is because to serve more developed, and initially more lucrative markets, the NGSO network operator would have already borne high start-up costs to launch its network. Since this network would have satellites that pass over all points of the earth, serving areas outside the initial markets would be a matter of

¹²¹ Second Notice, 10 FCC Rcd at 4191, n.74.

¹²² RR 2613 applies to any NGSO network, whether for a NGSO FSS network, or for a NGSO MSS feeder link network operating in FSS bands [below 30 GHz]. Briefly, under the current regime, NGSO networks must protect existing and future GSO networks in those bands. Effectively, NGSO networks are placed under certain conditions in a de facto secondary status relative to any GSO network, even though NGSO FSS networks for both types of use are not given secondary status in the international allocation table.

¹²³ For example, Iridium states that NGSO FSS regulatory issues should not be addressed at WRC-95, as they are not explicit in the '95 agenda and could undermine efforts to remove RR 2613 in FSS bands we propose for NGSO MSS feeder link use. See Iridium comments at 24.

¹²⁴ For example, GE states that RR 2613 should not be relaxed in FSS bands because it is unlikely that GSO FSS networks and NGSO networks could share spectrum on a co-frequency basis. In effect, stations first in time would be first in rights. See GE comments at 2-3.

¹²⁵ Hughes comments at 14-15.

"switching on" the satellites as they pass these areas.¹²⁶

66. To realize these benefits in the immediate future, segments of the existing 28 GHz FSS allocations should be made more useable for NGSO FSS networks at WRC-95. The issues of providing for NGSO FSS networks or for NGSO MSS feeder links are distinct, but hindered by a common regulatory obstacle -- RR 2613. The opportunity exists at WRC-95 to satisfy pressing and immediate requirements for two evolving, new technologies -- NGSO FSS networks and NGSO feeder links to support Big LEO networks. WRC-95 should address all issues related to RR 2613 and its constraint on NGSO operations.

67. We propose to remove this obstacle and allow NGSO networks to move forward.¹²⁷ In bands with identified NGSO network requirements there should be regulatory parity, i.e. co-primary services (footnote -- there are subtleties to RR 2613. For example the Radiocommunication Bureau does not currently apply that regulation. However, the regulatory uncertainty of such a provision for NGSO proponents causes pause in deciding whether to go forward with worldwide systems. To the point, a later arriving GSO system could cause an existing NGSO network to take extreme measures or even cease operations if harmful interference is caused to that GSO system.

68. Our proposal is to make available for NGSO FSS networks the following bands: 500 MHz (satellite-to-earth direction) at 18.8-19.3 GHz and 500 MHz (earth-to-satellite direction) at 28.6-29.1 GHz for NGSO FSS networks. Note that these bands are already designated internationally for the use we seek.¹²⁸ Our proposed action is only to remove regulatory obstacles to implementing new NGSO FSS services. See Appendix 1, Section E.

V. FINAL REPORT OF THE VOLUNTARY GROUP OF EXPERTS

69. The "Voluntary Group of Experts (VGE) to Study Allocation and Improved Use of

¹²⁶ In this regard, Big LEO networks are similar. However, the two types of NGSO networks are intended to serve somewhat different market needs.

¹²⁷ The CPM noted that additional sharing studies for NGSO FSS networks should be undertaken, particularly with regard to potential interference between NGSO MSS feeder links and NGSO FSS operations. See CPM Report at 52. However, this should not hinder consideration of this subject at WRC-95. Such analysis is ongoing and is similar to interference modeling for the MSS feeder link to MSS feeder link. If RR 2613 is suspended in spectrum we have identified for NGSO FSS networks, we expect that specific technical criteria for NGSO FSS use of that spectrum will be in place as networks are implemented. Further, such networks, under our proposal, will be subject to coordination under Res 46 as modified.

¹²⁸ With respect to our NGSO FSS and NGSO MSS feeder link proposals in the 28 GHz range, we note that the Commission is currently considering a domestic "band plan" that would resolve sharing issues between the local multipoint distribution service (LMDS), NGSO FSS and NGSO MSS feeder link networks. Our proposals here should prove sufficiently flexible to accommodate whatever domestic band plan is ultimately adopted. However, if necessary we conform our 28 GHz WRC proposals to conform to the adopted domestic plan.

the Radiofrequency Spectrum and Simplification of the Radio Regulations" was conceived by the ITU in 1989 as part of an effort to improve use of the radiofrequency spectrum and to simplify the international Radio Regulations (RR).¹²⁹ The VGE divided its work into three areas: Task 1 on the simplification of the allocation of frequency bands; Task 2 on the simplification of regulatory procedures; and Task 3 on the simplification of operational and administrative matters. The VGE issued its Report containing proposed simplified Radio Regulations in 1994.¹³⁰ WRC-95 will review the final report of the VGE and related proposals from administrations to revise, as appropriate, the international Radio Regulations and to provide a timetable for the implementation of recommended actions.

A. Task 1 - Simplification of Allocation of Frequency Bands

70. VGE Task 1 includes a broad review of the structure and framework for the international Table of Frequency Allocations (Table). The VGE decided that the present form of the Table continues to be appropriate. Most proposals in Task 1 are in terms of recommendations on general principles to be followed when making spectrum allocations. There are some specific proposals for simplification and consolidation of footnotes to the Table. We are generally supportive of the Task 1 results.

71. There are few areas where the proposals of VGE Task 1 could benefit from revision. These proposals address: a) simplifying the format for footnote allocations that reference the former Article 14; b) correcting a table listing frequency bands used for Radio Astronomy; c) deleting two outdated footnotes in the Table (RR 700 and RR 704A); and d) presenting a new recommendation embracing some of the long term guidelines on allocation practices presented by the VGE. These proposals are presented in the attachment. See Appendix 1, Section F, USA/ /1 - USA/ /64.

B. Task 2 - Simplification of Regulatory Procedures

72. In Task 2 the VGE undertook a complete revision of the Radio Regulation's regulatory procedures now embodied in Articles 11-17, Appendices 1-5 and 25-30B, and in several resolutions from previous conferences -- including Resolution 46. These provisions encompass the rights and obligations relating to frequency assignments; status of entries in the Master International Frequency Register; advance publication of space systems; coordination procedures; and world and regional frequency allotment and assignment plans. The VGE recommends a single generic regulatory procedure for coordination and notification of radio frequency assignments based on common elements of procedures now in use. Some unique regulatory provisions that apply to certain bands and services are retained. The VGE sought to further simplify the procedures by excising

¹²⁹ See Final Acts of the Plenipotentiary Conference, Resolution No. 8 (Nice, 1989). The ITU Administrative Council implemented the Resolution and formed the VGE in 1990.

¹³⁰ Report by the Voluntary Group of Experts to Study Allocation and Improved Use of the Radio Frequency Spectrum and Simplification of the Radio Regulations (VGE Report) (1994). The VGE Report consists of 3 parts: Part A - General Guidelines and Recommendations; Part B - Recommended Changes to the Radio Regulations; and Part C - the Simplified Radio Regulations. Portions of the report are associated with the docket of this proceeding.

some of the details of the procedures from the Radio Regulations and placing them in ancillary documents, including the Rules of Procedure to be developed by the Radiocommunication Bureau.¹³¹

73. We support generally Task 2 efforts to simplify the Radio Regulations' regulatory procedures. However, the decision to remove important regulatory text from the Radio Regulations to ancillary texts, leaving development of important details for later consideration, accomplishes the intended simplification. With certain adjustments to the Task 2 portion of the VGE Report, the simplified provisions can be made simpler and thereby better address the VGE's goals. Other adjustments are intended to reduce the number of coordinations.¹³² Attached are recommended U.S. Proposals to make these adjustments. See Appendix 1, Section G, USA/ /1 - USA/ /111.

74. We also propose a Resolution to defer consideration of the applicability of Article S10 (Procedure for Modification of a Frequency Allotment or Assignment Plan) to current Appendices 30 and 30A (Plans and Procedures for Broadcasting-Satellite Service and Feeder Links) until a future WRC.¹³³ See Appendix 1, Section G, Resolution No. USA-S10.

C. Task 3 - Simplification of Operational and Administrative Matters

75. VGE Task 3 includes a review of the textual provisions on operational and administrative matters, including related Appendices, to: improve the presentation of these provisions; eliminate unnecessary provisions; and remove text that could be maintained by the Study Groups of the ITU-R. The VGE adopted several principles in this regard, the most significant of which was that current practices and the substance of the provisions remain unchanged by the simplification. A second important principle adopted by the VGE was to eliminate outdated, redundant, or otherwise unnecessary provisions as well as those that are required by other provisions.

76. Task 3 also sought to reduce the physical bulk of the Radio Regulations by transferring certain text and appendices to other ITU instruments. This was accomplished by using the principle of "incorporation by reference" whereby some technical text with treaty status (*i.e.*, the mandatory status enjoyed by provisions of the Radio Regulations) would be transferred to ITU-R Recommendations, but effectively be made a part of the Radio Regulations, and thus imbued with treaty status, by use of a cross referencing provision in the body of the Radio Regulations.¹³⁴ This cross reference would be to make explicit note of the Recommendation to be incorporated, including subsequent revision numbers, to ensure that only the version approved by a WRC could be incorporated. We support the concept of incorporation by reference and employ this concept in our

¹³¹ See Notice, 9 FCC Rcd at 2432-33.

¹³² In accordance with commenters' suggestions, we also propose to modify S9.30 to permit requests for coordination to be submitted directly to the Bureau. See Iridium comments at 21-22; Iridium reply comments at 21; Motorola reply comments at 17. See also CPM Report at 85.

¹³³ Accord IAC Final Report at 22, 57-63.

¹³⁴ VGE Report, Part A at 33-34.

attached recommended proposals.¹³⁵ We are sensitive, however, to the concerns of other Administrations, expressed in the CPM Report, that the incorporated provisions should remain easily accessible to all Members and we support the idea of publishing linked provisions in a single companion volume to the Radio Regulations.¹³⁶

77. In general, we support the work of Task 3. Some modifications, mostly of an editorial nature, have been prepared in collaboration with the government agencies participating in the RCS. These recommended proposals are included in Appendix 1, Section H, USA/ /1 - USA/ /13 .

VI. OTHER WRC-95 ISSUES

A. Space Services

78. Earth Stations in the 2025-2110 MHz Band. WARC-92 upgraded to primary the status of the space research, space operation, and Earth exploration-satellite services in the 2025-2110 MHz band. This band is also allocated for primary fixed and mobile use. In the United States, the band is allocated to the mobile service on a primary basis and is generally used for electronic news gathering purposes. WARC-92 did not specify power limits appropriate for earth stations sharing with other services in the band. Although RR No. 2541 provides power limits for earth stations operating in frequency bands between 1 and 15 GHz, explicit limits for earth stations in the space science services are not given. In the Second Notice, we asked whether existing RR No. 2541 limits are appropriate for 2025-2110 MHz earth stations.¹³⁷

79. There were no comments responding to our Second Notice request. The IAC proposed that the U.S. position be to support proposals of other administrations to apply the RR No. 2541 power limits to space science services earth stations in the 2025-2110 MHz band.¹³⁸ The CPM concluded that the power limits of RR No. 2541 could be met by space science service earth stations operating in the 2025-2110 MHz band if necessary to protect terrestrial services.¹³⁹

80. In the absence of comments or technical studies to the contrary, we propose that the RR No. 2541 power limits apply to the space science services in the 2025-2110 MHz band. See Appendix 1, Section I, USA/ /1.

81. Fixed Satellite Service Use of 13.75-14.0 GHz Band. The 13.75-14.0 GHz band is shared with the radiolocation and radionavigation services and is available on a secondary basis for

¹³⁵ Accord Iridium reply comments at 21; Motorola reply comments at 17.

¹³⁶ CPM Report at 87.

¹³⁷ Second Notice, 10 FCC Rcd at 4206-07.

¹³⁸ See IAC Report at 273-74.

¹³⁹ See CPM Report at 73.

the space research, Earth exploration-satellite, and standard frequency and time- signal satellite services. WARC-92 adopted footnote RR 855A to the international Radio Regulations that specifies technical criteria for sharing among services in this band.¹⁴⁰ Resolution 112 (WARC-92) resolves that the criteria specified in RR 855A be studied and that studies be conducted on the technical compatibility between FSS and secondary allocations in the 13.75-14.0 GHz band. Resolution 112 also recognizes that RR No. 855B stipulates that until 1 January 2000, stations of the fixed-satellite service shall not cause interference to NGSO space stations in the space research service and the Earth exploration-satellite service.

82. We noted that there appeared to be general agreement on the values developed in ITU-R Task Groups. We proposed to modify RR 855A to include those values and to modify RR 855B to include constraints on the fixed-satellite service to allow the space research service and the Earth exploration-satellite service to operate beyond the year 2000.¹⁴¹ Having completed the studies specified in Resolution 112, and upon their acceptance, Resolution 112 could then be suppressed.

83. Commenters support our proposals.¹⁴² The IAC recommended to us our original proposal and maintains that recommendation in its Final Report.¹⁴³ The CPM also concludes that all necessary studies have been completed to satisfaction and Resolution 112 can be suppressed and the appropriate modifications made to RR Nos. 855A and 855B.¹⁴⁴ We maintain our Second Notice proposal. It appears in final form in Appendix 1, Section I, USA/ /1 - USA/ /3.

84. Space Services Allocations. Agenda item 3 for WRC-95 provides for consideration of Resolution 712 (WARC-92), with a view towards taking action at WRC-97. The following issues relating to space science services are considered under Resolution 712: (1) providing worldwide primary allocations for the Earth-exploration and space research services in appropriate bands within the 8-20 GHz range; (2) satisfying inter-satellite service requirements for up to 50 MHz of spectrum near 23 GHz; (3) providing up to 1 GHz of spectrum for space-based active Earth sensors around 35 GHz; and 4) including certain ITU-R-approved space science service coordination parameters in Appendix 28 of the Radio Regulations. The Commission is not making specific proposals on these issues at this time.

¹⁴⁰ These criteria include minimum and maximum e.i.r.p. values of 68 dBW and 85 dBW, respectively, and a minimum antenna diameter of 4.5 meters for earth stations in the fixed-satellite service. Footnote 855A also provides a maximum e.i.r.p. value for stations in the radiolocation and radionavigation services.

¹⁴¹ Second Notice, 10 FCC Rcd at 4207-08.

¹⁴² See, e.g., CWS comments at 2-4; Hughes at 16.

¹⁴³ IAC Final Report at 258.

¹⁴⁴ CPM Report at 75.

B. Appendices 30 and 30A

85. The WRC-95 agenda contains two items relating to Appendices 30 and 30A, which provide plans for broadcast-satellite services (BSS) and associated feeder links. The consideration of these items by WRC-95 could impact broadcasting-satellite systems in the United States. Comments were received from Hughes and USSB on this subject and the IAC and the CPM considered these matters in detail.

86. WRC-95 will also consider the VGE Report and its three recommendations that would lead to changes in how the Region 2 Plans, contained in Appendices 30 and 30A, are presented in the Radio Regulations. Besides removing the Plans themselves from the Regulations, these recommendations would replace the procedures for Plan implementation by new "simplified procedures" applicable to all space services and would adopt a new "generic" modification procedure. The commenters and the IAC agree that the consideration of the VGE Report in this area should be deferred to WRC-97, when Appendices 30 and 30A may be otherwise modified. We agree and recommend that the U.S. delegation to WRC-95 support this position.

87. WRC-95 also will consider modifications to the Regions 1 and 3 Plans in Appendices 30 and 30A, with a view to WRC-97 taking action, as appropriate. The IAC and commenters are concerned that current U.S. system designs whose characteristics differ from the Region 2 Plan may be affected. They also expressed concerns that since the Commission, to date, has notified US BSS systems under Resolution 42 instead of formally modifying the Region 2 Plan, that these systems will not receive international protection. Some concern is warranted since the full range of protections provided to BSS systems notified under Appendix 30 are not available to BSS systems notified only under Resolution 42. Early indications are that WRC-95 will adopt planning principles to use for the modification of the Region 1 and 3 Plan. The U.S. position will be that these modifications must protect all in-orbit U.S. BSS and FSS systems and ensure the continuity of deployment of new U.S. BSS systems.

88. WRC-95 agenda Item 3a also requires that consideration be given to aligning Region 1 and 3 orbital locations allotted in Appendix 30 for BSS and Appendix 30B for FSS. Such alignment could allow a country to launch a hybrid BSS/FSS satellite. Any such alignment must also take into account the effects on the Region 2 Plans and existing FSS assignments. The IAC found that, subject to appropriate inter-Regional sharing criteria, the impact on Region 2 would be negligible and would lead to desirable improvements in the usefulness of the Regions 1 and 3 Plans. ITU-R WP 10/11S and the CPM found that if the idea was applied systematically, the approach will complicate planning exercises, but could be taken into account in some cases. Since this item addresses principally Regions 1 and 3, we will not put forward any proposals regarding Appendices 30/30A at this time, but will follow this matter closely, both at ITU-R SG 10-11/S, which next meets in September, before the Conference, and at WRC-95 itself.

89. The Second Notice raised the issue of inter-Regional sharing criteria. We asked whether or not these criteria might be modified for Region 2 on a reciprocal basis with Regions 1 and 3. While this matter elicited some comment, no concrete proposals were submitted. We find that at this time a proposal would be premature.

C. High Frequency Broadcasting

90. WRC-95 Agenda Item 3c addresses the availability of High Frequency Broadcasting (HFBC) bands allocated at WARC-79 and WARC-92.¹⁴⁵ The use of these bands was conditioned on the development of an acceptable worldwide planning system which has proven to be a difficult task due to excessive demand and limited HFBC spectrum. The ITU has established Task Group 10/5 for the purpose of addressing planning procedures.

91. Task Group 10/5 has produced a draft report that examines several planning procedures for broadcasting and other services. These procedures are based on informal coordination and supported by agreed technical evaluations. The CPM reports that based on accomplishments to date, Task Group 10/5 expects to present to WRC-97 a suitable planning procedure for all bands allocated to HF broadcasting. The CPM recommends that given the status of Task Group 10/5's work, WRC-95, when reviewing the VGE Report consider holding in abeyance revision of Article 17 (Article S12) until WRC-97.¹⁴⁶ We therefore do not offer a specific proposal at this time, but would likely support this recommendation in U.S. position papers at WRC-95.

VII. FUTURE CONFERENCE AGENDAS

92. WRC-97 Agenda. Under the ITU's new four-year conference planning cycle, WRC-95 will recommend an agenda for WRC-97, based on the preliminary agenda adopted at WRC-95, and a preliminary agenda for WRC-99.¹⁴⁷ Our Notices requested comment on whether we should propose at WRC-95 any changes to the recommended WRC-97 agenda and whether there were subjects that we should seek to place on a preliminary WRC-99 agenda or future conference agendas.¹⁴⁸ We also charged the IAC, through IWG-6, to provide advice on topics for future conference agendas.¹⁴⁹

93. The majority of the commenters expressed the view that most of WRC-97 should be reserved for consideration of outstanding MSS issues that will carry over from WRC-95.¹⁵⁰ Several

¹⁴⁵ Resolution No. 523 WARC-93 resolves that administrations will not bring broadcasting stations into service in certain bands until a planning procedure for their use is in place.

¹⁴⁶ See CPM Report at 82.

¹⁴⁷ A copy of the recommended agenda for WRC-97 is attached to the Notice. 9 FCC Rcd at 2443.

¹⁴⁸ Notice, 9 FCC Rcd at 2437; Second Notice, 10 FCC Rcd at 4215-16.

¹⁴⁹ Second Notice, 10 FCC Rcd at 4216-18.

¹⁵⁰ AMSC comments at 12; CMC comments at 27; CWS at 11-12; Iridium comments at 24-26; Motorola comments at 13; TRW comments at 26-27. Item 1 of the WRC-97 preliminary agenda provides for "tak[ing] appropriate action in respect of those urgent issues that were specifically requested by the 1995 World Radiocommunication Conference." We note that it is probable that VGE issues, like MSS issues, will carry over from WRC-95 to WRC-97, and perhaps beyond.

propose that language be added to Item 3.1 of the preliminary WRC-97 agenda to expressly include consideration of new allocations for MSS service links in addition to MSS feeder links.¹⁵¹ On the other hand, NOAA urges that consideration of MSS issues not supersede consideration of the space service issues that are provided on the WRC-97 preliminary agenda.¹⁵² Several commenters state that the consideration of allocations for NGSO satellite networks, and associated regulatory aspects, should be added to the WRC-97 agenda.¹⁵³ CWS suggests that the numerous issues on the WRC-97 preliminary agenda be prioritized with the top half preserved on the WRC-97 agenda and the second half relegated to the WRC-99 preliminary agenda.¹⁵⁴

94. The IAC Final Report presents a menu of additional topics for WRC-97. As we described in the Second Notice, these recommendations include: identification of spectrum below 1 GHz on a regional or global basis for terrestrial public safety applications;¹⁵⁵ consideration of spectrum requirements and allocations for the Transport Information and Control Systems (TICS);¹⁵⁶ and an allocation of the 5000-5250 MHz band to the mobile service for use by high speed wireless data systems (HSWDS).¹⁵⁷ We decline to propose that these topics be added to the WRC-97 agenda at this time for the following reasons.

95. With respect to the "identification" of spectrum for public safety applications, proposed to IWG-6 by TIA, we reiterate that there already exists a terrestrial fixed and mobile service

¹⁵¹ See also IAC Final Report at 317. Item 3.1 of the WRC-97 Preliminary Agenda provides for the consideration of "unresolved and other pressing issues concerning frequency allocations and regulatory aspects as related to the mobile-satellite services, including allocations for feeder links for mobile-satellite services, as appropriate."

¹⁵² NOAA comments at 7-8. These issues include consideration of Res. 712 (WARC-92), Rec. 621 (WARC-92), Rec. 711 (Orb-88), Res. 712 (WARC-92), and allocation of frequency bands above 50 GHz to the Earth exploration-satellite service. Id. at 7-10.

¹⁵³ Iridium comments at 24-26; Teledesic comments at 20-21; LQP reply comments at 11-12; Motorola reply comments at 11-12. Teledesic proposes that an item be added to the WRC-97 agenda to consider regulatory aspects of NGSO-FSS and MSS networks in the 17.7-59.0 GHz range. See IAC Final Report at 287-89.

¹⁵⁴ CWS comments at 13. CWS also asserts that Rec. 715 (Orb-88) and Rec. 719 (WARC-92) should be considered at WRC-97. Id. at 11-12.

¹⁵⁵ In the IAC Final Report, TIA recommends that frequencies below 1 GHz be identified for relatively inexpensive, interoperable terrestrial public safety systems. It contends that a unique opportunity may arise to identify spectrum in the 380-399.9 MHz band worldwide for such use. IAC Final Report at 290-97. See also Second Notice, 10 FCC Rcd at 4218; AAR comments at 9-12; Motorola comments at 19-22; TIA reply comments 8-9.

¹⁵⁶ IAC Final Report, at 298-304. See also ITS America comments at 1-2.

¹⁵⁷ IAC Final Report, at 304-17. The report includes LQP's opposition to this proposal, which opposition is joined by CMC. See also AT&T comments at 4-6; Motorola comments at 22-23; LQP reply comments at 7.

allocation in the desired frequency range to accommodate this proposed specific use.¹⁵⁸ For a WRC to identify a specific use within such an existing international service allocation would run counter to the frequency allocation methods promulgated by the VGE that prefer allocation of broadly defined services.¹⁵⁹ The Commission's allocation philosophy similarly favors broad allocations to permit flexible development of products and services.¹⁶⁰ In any event, it is our experience that such specific uses of an existing international allocation are best left to individual administrations. Our decision not to propose this item for WRC-97 agenda does not in any way serve to preclude a future domestic decision to designate spectrum for public safety use.

96. We find the proposal advocated by the International Transportation Society of America (ITS America) to IWG-6 for spectrum allocations for TICS -- the international nomenclature for the Intelligent Transportation Service (ITS) or the Intelligent Vehicle Highway Service (IVHS) -- is premature. TICS is at a preliminary stage in which system architecture is still being designed and spectrum is yet to be identified. TICS proponents have just recently succeeded in getting an initial question, Study Question 51/8, added to Study Group 8 of the ITU-R for consideration of TICS requirements and characteristics. Also, we have not yet been provided with sufficient information to support a determination that an allocation is appropriate in light of the current domestic treatment of ITS as a land mobile service.¹⁶¹ We will monitor the progress of the work on TICS in Study Group 8 and will consider in the future proposing any appropriate TICS items for WRC agendas.

97. Finally, we decline to propose to add to the WRC-97 agenda an allocation in the 5.2 GHz band for HSWDS, a proposal AT&T advocated to IWG-6. As discussed above, we are seeking at WRC-95 allocation of this band for NGSO MSS feeder links. While AT&T states that HSWDS could share spectrum in the band with ARNS and NGSO MSS feeder links (with geographic separation), we conclude that consideration of HSWDS would complicate the issue of sharing 5 GHz spectrum between aeronautical radionavigation and NGSO MSS feeder links.¹⁶² Consideration of HSWDS use of 5 GHz may be addressed after resolution of the feeder link issue if necessary. In any

¹⁵⁸ Second Notice, 10 FCC Rcd at 4199-200 n.88, 4218 n.155. Furthermore, the Radio Regulations do not contain a definition for a public safety service.

¹⁵⁹ VGE Rec.No. 1/7 provides: "WRCs should, wherever possible, allocate frequency bands to the most broadly defined services to provide the maximum flexibility to administrations in spectrum use, taking into account technical, operational, economic and other relevant factors. VGE Report, Part A at 10.

¹⁶⁰ See, e.g., Allocation of Spectrum Below 5 GHz Transferred from Federal Government Use, First Report and Order and Second Notice of Proposed Rule Making in ET Docket No. 94-32, FCC 95-37, at paras. 48-54, released Feb. 17, 1995; Amendment of the Commission's Rules to Establish New Personal Communications Services, Second Report and Order in GEN Docket 90-314, 8 FCC Rcd 7700, 7710-13 (1993).

¹⁶¹ IWG-6 states that "ITS America anticipates that some ITS spectrum allocations are likely to be categorized as land mobile services." It also states the FCC is initially accommodating these services in the Location and Monitoring System and describes possible domestic regulatory treatment as unlicensed systems. IAC Final Report at 299.

¹⁶² HSWDS would also be required to demonstrate their ability to share with ARNS systems in the band.

event, as with the foregoing proposed additions to the WRC-97 agenda, it has yet to be demonstrated that an international allocation is necessary to implement this service in the U.S.¹⁶³

98. A two-year conference cycle provides the flexibility and opportunity to make proposals to meet changes in a rapidly evolving telecommunications environment. In the United States, we have shown a willingness to take advantage of such opportunities as our domestic needs develop.¹⁶⁴ However, for long-term endeavors whose completion may span several conferences, there should be continuity from conference to conference to ensure that once started, all issues are resolved. Thus, we recommend that the primary focus of WRC-97 be the continued consideration of global satellite service issues. These include removing technical constraints where appropriate, easing unnecessary regulatory burdens, and obtaining additional spectrum to allow global satellite systems to go forward -- including those of new proposals such as Teledesic's proposal for a NGSO FSS network.¹⁶⁵ We will support at WRC-95 a proposal suggested by Teledesic to the IAC and by the federal government agencies to add to the WRC-97 agenda a primary allocation for the Inter-Satellite Service (ISS) in the band 65.0-71.0 GHz.¹⁶⁶ Further, consideration of the VGE's recommendations for simplifying the Radio Regulations may be an extremely time-consuming task which may also require continuation at upcoming WRCs. Additionally, there are numerous "smaller," but no less important topics that the U.S. has supported since preparations for WRC-93 that should be resolved before moving on to new topics. Finally, we should begin to introduce new subject matters for consideration to the extent conference time allows. While we do not offer a specific proposal for the WRC-97 agenda at this juncture, we will bring to WRC-95 position papers and associated draft proposals expressing our views on the WRC-97 agenda relative to the progress we observe at WRC-95.

99. WRC-99 Preliminary Agenda. The IAC Final Report and ARRL advocate consideration of an international amateur radio permit at WRC-99 to be similar to the reciprocal arrangements enjoyed under CEPT Recommendation T/R 61-01 or the International Amateur Radio Permit currently under consideration by the Organization of American States.¹⁶⁷ We will support consideration of an international amateur permit on the WRC-99 preliminary agenda.

¹⁶³ Pending before the Commission are Petitions for Rule Making filed by Wireless Information Networks Forum and Apple Computer, Inc. requesting institution of domestic proceedings for unlicensed wireless data systems in the 5 GHz band.

¹⁶⁴ A case in point would be our domestic decision to satisfy an immediate need for a young, but more mature service -- PCS -- by allocating additional spectrum for PCS at the expense of MSS allocations we had obtained at WARC-92. At WRC-95, we seek to adjust the WARC-92 MSS allocations to promote development of global MSS. We see this flexibility as an advantage to biennial WRCs -- no administration need be unnecessarily locked into past allocations in the face of changing requirements.

¹⁶⁵ We will propose that WRC-97 consider allocations and regulatory aspects for non-GSO FSS systems in the Ka band. See Teledesic comments at 20-21.

¹⁶⁶ See IAC Final Report at 280, 317; Letter from Richard Parlow, Associate Administrator, NTIA to Richard Smith, Chief, Office of Engineering and Technology, May 4, 1995.

¹⁶⁷ IAC Final Report at 318-19; ARRL comments at 5-7.

VIII. CONFERENCE PREPARATORY PROCESSES

100. In the Notice, we observed that a review of the Commission's methods for preparing for international radiocommunication conferences should be undertaken to ensure continuing effective representation of U.S. interests in light of the ITU's new 2-year conference regime. The WRC cycle will require a continuous process of conference preparation in view of the long lead time required to develop proposals for any given conference.¹⁶⁸ In the Second Notice, we described the Commission's recent consolidation of its international functions into a single operating bureau and the creation of an office within the new bureau charged with ongoing responsibilities for WRC planning and related ITU-R activities.¹⁶⁹ We invited public comment on the topic of future FCC conference preparation methods and directed IWG-6 of the IAC to also study the question.

101. The IAC provides in its Final Report a well-considered discussion of the topic of conference preparatory processes including a proposed timeline for domestic conference preparatory activities.¹⁷⁰ The IAC points out that the ITU's new biennial conference cycle marks a dramatic change not only in the timing of the conferences, but also in their fundamental nature: "No longer is each WRC a self-contained special purpose conference. Rather each conference is part of a continuum of events with past, present and future issues on each agenda."¹⁷¹ As a consequence of this change, the IAC concludes that the emphasis must be on continuous conference preparation, including ongoing IAC activities and improved coordination among the three primary government actors in the process -- FCC, NTIA and State -- and the private sector.¹⁷² Specifically, the IAC recommends the following improvements: (1) the Commission should renew the IAC within three months after each WRC to commence preparation for the next WRC; (2) the Radiocommunication Policy Branch should oversee the IAC process and assist in the coordination process with NTIA and State; (3) the Notice of Inquiry for the next WRC should be initiated within three months after the last WRC and continue to be closely related to the IAC process; (4) the Commission should support a more open IRAC process and increased coordination by IRAC with the private sector; and (5) the Commission should develop, in cooperation with the NTIA and State, a timeline for the institution and completion of essential conference preparatory activities which provides for completion of the preparatory process in time for the second CPM meetings and coordination meetings of the Inter-American Telecommunications Commission (CITEL).¹⁷³ The comments also reflect these views.¹⁷⁴

¹⁶⁸ Notice, 9 FCC Rcd at 2438.

¹⁶⁹ Second Notice, 10 FCC Rcd at 4220-21. This office is the Radiocommunication Policy Branch of the International Bureau's Satellite and Radiocommunication Division.

¹⁷⁰ IAC Final Report at 320-27.

¹⁷¹ Id. at 321.

¹⁷² Id. at 321-22.

¹⁷³ Id. at 320-21.

102. We generally agree with the IAC's recommendations and plan to incorporate them into our conference preparatory process to the extent possible. We also support the timeline concept and its goal of developing draft recommended U.S. proposals in time for the CPM immediately preceding the WRC. In addition to allowing for more effective participation at the CPM, early development of proposals will permit timely discussions with other countries, most notably with Region 2 nations participating in the CITEL's WRC Preparatory Joint Working Group.¹⁷⁵ We will also undertake to renew the IAC's Charter and to select its new Chair immediately following WRC-95 and to adopt an initial Notice of Inquiry based on the WRC-97 agenda soon thereafter -- ideally within the first quarter of 1996.

103. Finally, the commenters and the IAC advance ideas on the formation of the U.S. delegation to WRCs and the private sector's ability to participate directly in the NTIA's preparatory activities and development of final U.S. proposals.¹⁷⁶ We generally support the views expressed by the commenters and IAC participants. We note in this regard that the head of the U.S. delegation to WRC-95 has decided to include a member of the private sector on his steering committee. Also, while the Commission cannot gain for the private sector direct access to NTIA, we note that government representatives have been working closely with the private sector as participants and contributors to the IAC, and that Commission staff has actively participated in NTIA's preparations for WRC-95. The Commission will continue to encourage openness in all facets of the proposal development process and to seek ways of promoting maximum participation of the private sector in all phases of conference preparation.

IX. PROCEDURAL MATTERS

104. The motion for acceptance of late-filed further reply comments filed by Alcatel Network Systems, Inc. and other FS interests on May 15, 1995, IS GRANTED.

105. Authority for issuance of this Report is contained in Sections 154(i), 303(g), 303(r), and 332(a) of the Communications Act of 1934, as amended, 47 U.S.C. §§ 154(i), 303(g), 303(r), and 332(a).

¹⁷⁴ CMC comments at 27-28; CWS comments at 13-15; ORBCOMM comments at 11; USSB comments at 3; AMSC comments at 14; LQP comments at 31.

¹⁷⁵ See AMSC comments at 16; CWS comments at 13-15; CWS reply comments at 10-11; ARRL reply comments at 6.

¹⁷⁶ IAC Final Report at 323-24; CMC comments at 27-28; ORBCOMM comments at 13-14; USSB comments at 3-4; MCHI late comments at 11-12; NOAA reply comments at 13-14.

106. For further information concerning this proceeding, contact Damon C. Ladson, (202)739-0510, or Audrey L. Allison, (202)739-0557, of the International Bureau's Satellite and Radiocommunication Division, Radiocommunication Policy Branch.

FEDERAL COMMUNICATIONS COMMISSION

A handwritten signature in black ink, reading "William F. Caton". The signature is written in a cursive style with a large, stylized 'W' and 'C'.

William F. Caton
Acting Secretary

APPENDIX 1

RECOMMENDED UNITED STATES PROPOSALS

UNITED STATES PROPOSALS

for the

WORLD RADIOCOMMUNICATION CONFERENCE

(GENEVA, 1995)

Washington, D.C.

June, 1995

RECOMMENDED UNITED STATES PROPOSALS

METHOD OF PRESENTATION

1. Services shown in all capital letters (*e.g.*, MOBILE-SATELLITE SERVICE) in the Allocation Table are services with primary status.
2. Services shown with an initial capital letter and the remaining letters in lower case (*e.g.*, Fixed) in the Allocation Table are services with secondary status.
3. Underlining (*e.g.*, Underlining) indicates new text proposed for adoption.
4. Strike-out text (*e.g.*) indicates existing text proposed for deletion.
5. NOC indicates provisions for which no change is proposed.
6. NOC indicates a matter of particular significance, for which it is important that no changes be made to the current provisions.
7. SUP indicates provisions that are proposed for suppression.
8. MOD indicates a proposed modification to the existing text.
9. (MOD) indicates proposed modifications that are strictly editorial in nature.
10. ADD indicates new provisions that are being proposed for addition.

**Index to
RECOMMENDED UNITED STATES PROPOSALS**

Section A	MSS Below 1 GHz
Section B	MSS Between 1 and 3 GHz
Section C	MSS Feeder Links
Section D	Modified Resolution 46
Section E	NGSO FSS Networks Around 28 GHz
Section F	VGE Task 1
Section G	VGE Task 2
Section H	VGE Task 3
Section I	Space Services

Section A

RECOMMENDED UNITED STATES PROPOSALS

Agenda Items 2.1a) & 3d)

MSS Below 1 GHz

Section B

RECOMMENDED UNITED STATES PROPOSALS

Agenda Items 2.1 a), 2.1b) & 3d)

MSS Between 1 and 3 GHz

United States of America

Proposals for Agenda Items 2.1(a) and 3(d)

MOBILE-SATELLITE SERVICES BELOW 1 GHz

Introduction:

The attached U.S. proposals address issues related to mobile-satellite services (MSS) operating below 1 GHz. WARC-92 allocated 3.45 MHz of primary spectrum to this service. Since that time, the United States has licensed one non-geostationary MSS system to operate in these primary frequencies, and has six pending system applications. Satellites from the first system have already been launched.

Experience with the use of the MSS bands below 1 GHz, as well as recent studies of the ITU-R that are reflected in the Report of the Conference Preparatory Meeting (CPM), indicate that several modifications could be made to the existing MSS frequency allocations to facilitate their use. Proposals to facilitate the use of existing allocations for mobile-satellite services may be made pursuant to agenda item 2.1(a). Accordingly, the U.S. proposes to modify a number of footnotes to the 148-150.05 MHz band to improve coordination efforts in this band. In accordance with a suggestion from the Voluntary Group of Experts that allocations be made, where possible, to the broadest category of service, the U.S. further proposes to change the Land Mobile-Satellite allocation in the 149.9-150.05 MHz band to a more general Mobile-Satellite Service.

In addition to discussing the improvement of existing MSS allocations, the CPM Report states that 7-10 MHz of additional spectrum will be necessary to meet the near-term (that is, by the year 2000) requirements for MSS below 1 GHz. Both world wide operator demand and anticipated consumer demand support this conclusion. Because WRC-95 is empowered to make limited allocations to MSS pursuant to agenda item 3(d), if such allocations are necessary, the United States proposes to modify the international Table of Allocations to include 6.105 MHz of spectrum to be used by MSS, or associated feeder links, on a co-primary basis with existing users. The bands suggested for allocation to MSS include 216-216.5 MHz (space-to-Earth), 217.5-218 MHz (space-to-Earth), 399.9-400.05 MHz (Earth-to-space), 401-404 MHz (space-to-Earth, with the 401.2-401.7 MHz segment allocated to MSS on a secondary basis), 455-456 MHz (Earth-to-space) and 459-460 MHz (Earth-to-space).

Article 8 of the Radio Regulations

USA/ /1
NOC

599A

Reason: The Report of the Conference Preparatory Meeting confirms that the pfd trigger level of -125 dB(W/m²/4kHz) for coordination with terrestrial services is appropriate at this time.

MHz
148 - 150.05

USA/ /2
MOD

Allocation to Services		
Region 1	Region 2	Region 3
148-149.9 FIXED MOBILE except aeronautical mobile (R) MOBILE-SATELLITE (Earth-to-space) MOD599B 608 MOD608A 608C	148-149.9 FIXED MOBILE MOBILE-SATELLITE (Earth-to-space) MOD599B 608 MOD608A 608C	
149.9-150.05 LAND MOBILE-SATELLITE (Earth-to-space) <u>MOD599B</u> MOD609B RADIONAVIGATION-SATELLITE MOD608B 609 609A		

Reason: To allow for maximum flexibility in system implementation, the land mobile-satellite allocation in the 149.9 - 150.05 MHz band is proposed for any mobile-satellite service.

**USA/ /3
MOD**

599B The use of the bands 137 - 138 MHz, 148 -149.9 MHz, 149.9 - 150.05 MHz,
WARC-92 399.9 - 400.05 MHz, and 400.15 - 401 MHz, 455 - 456 MHz and 459 - 460 MHz
by the mobile-satellite service ~~and the band 149.9 - 150.05 MHz by the land~~
~~mobile-satellite~~ is limited to non-geostationary-satellite systems.

Reason: Modification to Footnote 599B is required to reflect the allocation to the mobile-satellite service of the 149.9 - 150.05 MHz, 399.9 - 400.05 MHz, 455 - 456 MHz and 459 - 460 MHz bands. See USA/ /2, USA/ /9, USA/ /15 and USA/ /16, below.

**USA/ /4
MOD**

608A The use of the band 148 -149.9 MHz by the mobile-satellite service is subject to
WARC-92 the application of the coordination and notification procedures set forth in MOD
Resolution 46 (~~WARC-92~~). The mobile-satellite service shall not constrain the
development and use of fixed, mobile and space operation services in the band
148 - 149.9 MHz. Administrations using mobile earth stations in the mobile-
satellite service shall ~~not produce power flux density in excess of 150~~
~~dB(W/m²/4kHz)~~ coordinate outside national boundaries through use of the
coordination distance method in Recommendation ITU-R M.[Doc.8/46].

Reason: Modification of Footnote 608A is required because the -150 dB(W/m²/4kHz) has proven to be operationally unusable. A coordination distance threshold is a more useful approach to facilitate coordination across national boundaries; this approach is supported in the report of the CPM.

**USA/ /5
MOD**

608B The use of the bands 149.9-150.05 MHz and 399.9 - 400.05 MHz by the ~~land~~
WARC-92 mobile-satellite service is subject to the application of the coordination and
notification procedures set forth in MOD Resolution 46 (~~WARC-92~~). The ~~land~~
mobile-satellite service shall not constrain the development and use of the
radionavigation-satellite service in the 149.9-150.05 MHz and 399.9 - 400.05
MHz bands . Land mobile earth stations of the land mobile-satellite service
shall not produce power flux density in excess of 150 dB(W/m²/4 kHz) outside
national boundaries. Mobile earth stations in the mobile-satellite service shall
coordinate outside of national boundaries through use of the coordination
distance method in Recommendation ITU-R M.[Doc.8/46].

Reasons: Modification of Footnote 608B is required because the -150 dB(W/m²/4kHz) has proven to be operationally unusable. A coordination distance threshold is a more useful approach to facilitate coordination across national boundaries. This revision is supported in the report of the CPM. The removal of 'land' in Footnote 608B reflects the change in the allocation of the 149.9-150.05 MHz band to the mobile-satellite service. Further modification of Footnote 608B was also required to reflect the allocation of the 399.9 - 400.05 MHz band to the mobile-satellite service. See USA/ /9.

USA/ 16
MOD

609B In the bands 149.9-150.05 MHz and 399.9-400.05 MHz, the allocation to the
WARC-92 land mobile-satellite service shall be on a secondary basis until 1 January 1997.

Reason: The removal of "land" in Footnote 609B reflects the change in the allocation table to the mobile-satellite service. Further modification to Footnote 609B was required to reflect the allocation of the 399.9 - 400.05 MHz band to the mobile-satellite service.

MHz
216 -216.5

USA/ 17
MOD

Allocation to Services		
Region 1	Region 2	Region 3
216-216.5 BROADCASTING <u>MOBILE-SATELLITE</u> (space-to-Earth) 621 623 628 629	216-216.5 FIXED MARITIME MOBILE <u>MOBILE-SATELLITE</u> (space-to-Earth) Radiolocation 627 627A	216-216.5 FIXED MOBILE BROADCASTING <u>MOBILE-SATELLITE</u> (space-to-Earth) 626

Reason: To make available additional spectrum for MSS systems, in accordance with the Report of the CPM which notes that 7-10 MHz of additional spectrum will be required for MSS below 1 GHz.

MHz
217.5 -218

USA/ 18
MOD

Allocation to Services		
Region 1	Region 2	Region 3
217.5-218 BROADCASTING MOBILE-SATELLITE (space-to-Earth) 621 623 628 629	217.5-218 FIXED MARITIME MOBILE <u>MOBILE-SATELLITE</u> (space-to-Earth) Radiolocation 627 627A	217.5-218 FIXED MOBILE BROADCASTING <u>MOBILE-SATELLITE</u> (space-to-Earth) 626

Reason: To make available additional spectrum for MSS systems, in accordance with the Report of the CPM which notes that 7-10 MHz of additional spectrum will be required for MSS below 1 GHz.

MHz
399.9-400.05

USA/ /9
MOD

Allocation to Services		
Region 1	Region 2	Region 3
399.9-400.05	RADIONAVIGATION-SATELLITE <u>MOBILE-SATELLITE (Earth-to-space)</u>	
609 645B MOD599B MOD608B <u>MOD609B</u>		

Reason: The TRANSIT system is being phased out of the 399.9 - 400.05 MHz band, making it available for a mobile-satellite service allocation. Footnote MOD609B is included to clarify that, in order to protect existing operations, MSS will be on a secondary basis until 1 January 1997.

**MHz
401-402**

**USA/ /10
MOD**

Allocation to Services		
Region 1	Region 2	Region 3
401-401.2	METEOROLOGICAL AIDS SPACE OPERATION (space-to-Earth) <u>MOBILE-SATELLITE</u> (space-to-Earth) 648AB <u>METEOROLOGICAL-SATELLITE (Earth-to-space)</u> <u>EARTH EXPLORATION-SATELLITE (Earth-to-space)</u> Earth Exploration Satellite (Earth-to-space) Fixed Meteorological Satellite (Earth-to-space) Mobile except aeronautical mobile <u>648AA</u>	
401.2-401.7	METEOROLOGICAL AIDS SPACE OPERATION (space-to-Earth) <u>Mobile-Satellite</u> (space-to-Earth) 648AB <u>METEOROLOGICAL-SATELLITE (Earth-to-space)</u> <u>EARTH EXPLORATION-SATELLITE (Earth-to-space)</u> Earth Exploration Satellite (Earth-to-space) Fixed Meteorological Satellite (Earth-to-space) Mobile except aeronautical mobile <u>648AA</u>	
401.7-402	METEOROLOGICAL AIDS SPACE OPERATION (space-to-Earth) <u>MOBILE-SATELLITE</u> (space-to-Earth) 648AB <u>METEOROLOGICAL-SATELLITE (Earth-to-space)</u> <u>EARTH EXPLORATION-SATELLITE (Earth-to-space)</u> Earth Exploration Satellite (Earth-to-space) Fixed Meteorological Satellite (Earth-to-space) Mobile except aeronautical mobile <u>648AA 648AC</u>	